FLORICULTURE

ARNOLD ARBORETUM
HARVARD UNIVERSITY

BULLETIN
OF POPULAR INFORMATION

SERIES 4. VOL. I MAY 26, 1933 NUMBER 7

BASSWOOD BARK AND ITS USE BY THE INDIANS. MANY of the plants used by the Indians have found an important place in our civilization. We grow their corn, tobacco, and potatoes on an enormous scale; we tap the sugar maple as they did; we smoke their tobacco. Their fiber plants have not fared so well. Most of them have been supplanted by immigrants from the Old World. A few of the ancient American species are occasionally tried out on a small scale but for the most part they are grown no longer, and except for a few specialists their very uses are forgotten. Such has been the fate of the fiber obtained from our common Basswood, *Tilia glabra*. It was once the main source of fiber for the Woods Indians of eastern North America. From its strong inner bark they made thread and rope which in turn were worked up into mats, bags, and baskets.

In her book on "Chippewa Customs", Miss Frances Densmore gives the following account of the use of Basswood among the Chippewa:

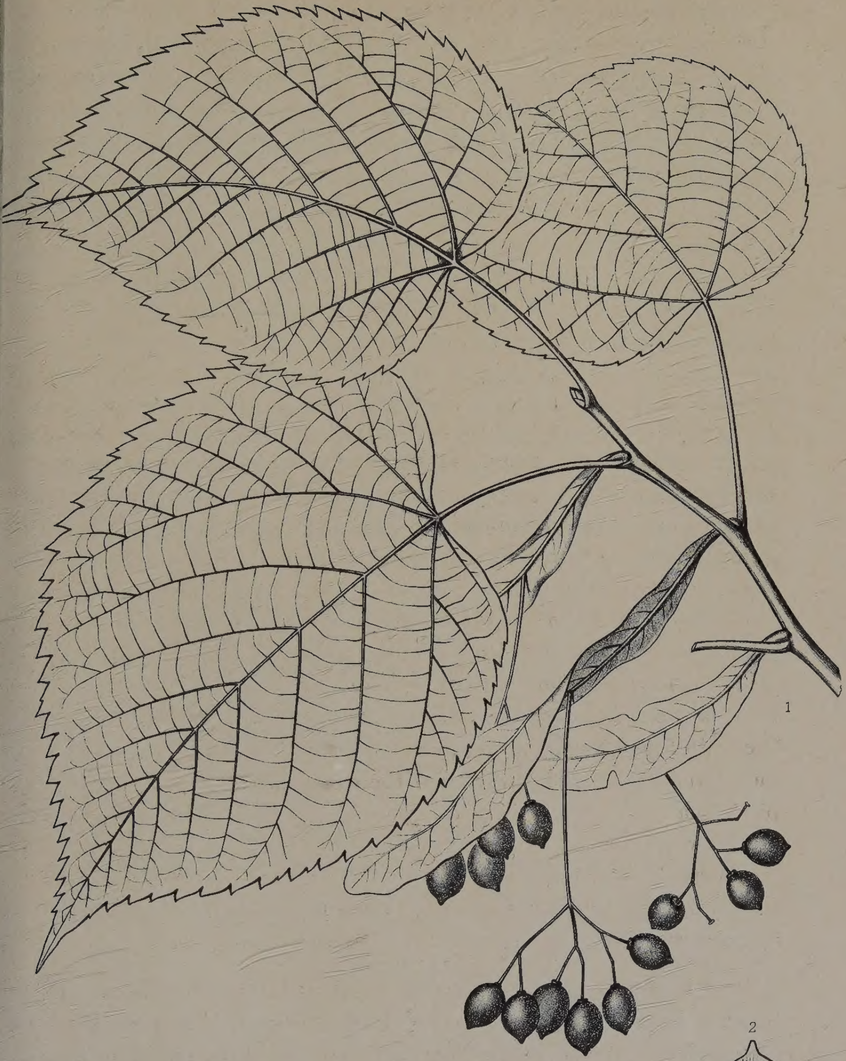
"One of the most important articles in the economic life of the Chippewa was the twine made from the fiber that lies between the bark and the wood of the basswood tree.

"In removing the bark from the tree an incision was made at a point as high as a man could reach, the cut descending straight to the ground, after which the bark was turned back in a sheet. It was then cut in lengthwise strips about four inches wide and laid among the reeds at the edge of a lake or pond, being held in place by tying the reeds together above it. There it remained for about 10 days. The writer saw these strips of bark taken from the water, softened and slippery from soaking. The rough outer bark was easily detached and the soft yellow fiber or inner bark heaped in the bottom of the boat. In this form it was ready to store with a woman's supply of birch bark, reeds, and other materials. There were many layers of this fiber, and the entire thickness would be needed for the strips in bags for boiling gum or in making baskets. Somewhat thinner fiber was used for woven bags, and one thickness was sufficient for twine, the fiber being split when the twine was made. In separating the layers of bark an Indian woman begins in the middle of a strip perhaps six feet in length and works toward the ends.

"Basswood bark was an article in such frequent use that a woman had a quantity of it in all thicknesses at hand and prepared it in various ways as it might be needed. If she wished to tie a small packet, she usually moistened a strip of bark by drawing it between her lips.

"The bark to be used for twisted cord was prepared by moistening it, separating it into layers, and tearing strips of the desired width. If the twine is to be very strong the bark is boiled. The woody fibers are detached from one another and the bark softened by drawing the strips of bark back and forth through the pelvic bone of a bear. This work, in old times, was usually done by children. The process of making twisted twine is described as follows by Dr. Skinner. The woman 'takes two of the fibers in one hand and holds them, spread a few inches apart, against her bare shin. She slides the palm of her other hand backward and forward over them until the fibers twist together. At the end of each yard she combs the fibers with her fingers, selects two more, and rolling half an inch of their ends with the ends of the old piece, makes a splice so perfect that it is invisible'. The work, as seen by the writer, was done on the flesh of the right leg above the knee, this forming a cushion on which the fibers were readily twisted. The entire process is dexterous and surprisingly rapid. Twine made in this manner was an important article of economic use."

All this is gone with the change from an Indian civilization. Basswood is an excellent fiber, but it cannot compete commercially with cotton, flax, and jute. There may be, however, some few white Americans who, like the author, will be interested in basswood bark even though it has no commercial possibilities. These few will be glad to know that it is surprisingly easy to obtain the fiber; one need not go into the process as thoroughly as did the Indians. Even a civilization-spoiled American, with a little practice, can produce twine superior to any on the market, or rope which will support two or three men. The



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whole process from tree to twine need not take longer than thirty minutes though greater pains will produce a more finished product.

The material is unusually adaptable and everything from fine sewing thread to strong baskets can be produced from the same gathering of bark. It can be taken from the tree at any time of year, though naturally it slips off most easily when the sap is running in the spring. Unless a very large amount is required, a single limb about four or five inches in diameter will provide plenty of material. Very often there are suckers sprouting up about the trunks of large trees and these are good material to work with, nor does their removal disfigure the tree. A five to six foot length, without side branches, is preferable if it can be obtained. A blunt wedge, inserted between the bark and the wood will start the bark to slip; it can be then taken off in long strips or pulled back in one piece like a glove. When it first comes off the tree the inner bark is soft and pliable; it can be worked up into string or rope, or cut in wide strips and used for weaving baskets. These latter will stiffen on drying and become very strong. A small tightly woven basket made by the author from freshly cut bark will now support the entire weight of a full grown man.

String, rope, and thread can be made from the inner fibers in the manner described by Miss Densmore. One can use freshly gathered bark which is still pliable, or older material can be softened by soaking in warm water. The process goes much faster when, like the Indians, one uses the bare thigh for the twisting. The work is done most easily with two strands, one for each hand. There is only one important principle to be remembered. *The strands should twist about each other in the opposite direction from which each is twisted on itself.* This sounds very complicated but a little practice will show that it is really a very simple trick to learn. If, for instance, the two strands are being twisted about each other in a clockwise direction, each should first of all be twisted *counter-clockwise* on its own axis. One soon learns to keep each strand rolling rapidly between thumb and forefinger, while the two are being twisted about each other in the opposite direction. If correctly twined they will not unwind, even after they have been cut, and the cord will be strong and even. Coarse cord is easily made; more practice is necessary before one can turn out thread fine enough for a needle. In the Field Museum of Natural History and in other institutions where there are large collections of Indian work may be seen beautiful bags and mats made in whole or in part from basswood bark. With a little patience, the interested white craftsman should be able to produce articles of similar workmanship from this durable and versatile fiber.

Edgar Anderson

EXPLANATION OF THE PLATE

Leaves and fruit of the Basswood or American Linden, **Tilia glabra** Vent. (= **Tilia americana** L. in part).

(From drawings by C. E. Faxon for Sargent's "Silva of North America".)

Plants of Current Interest. Heavy showers on the evening of May twentieth gave the Arboretum a much needed watering and the collections are now in splendid condition. Many of the Rhododendrons are already in flower, the Azaleas are in their prime, and the Lilac collection is still giving a fine show of bloom. The American species of Crabapple are now at their best and may be seen along the bank beyond the Forest Hills Entrance and at the foot of Peters Hill. The trees in the latter collection are particularly fine and are well worth a special visit. They can be reached by a two minute walk from the Bussey Street Entrance. It seems unfortunate that more people do not visit the Arboretum in the late afternoon and early evening. The delicate tints of the Lilacs and Crabapples show to their best advantage just before and after sunset and the gates remain open until well after sundown.

Wanted. There was at one time in cultivation in this country an upright or bushy variety of the common Trumpet-creeper. It was variously known as *Bignonia radicans speciosa*, *Tecoma radicans speciosa* and *Campsis radicans speciosa*. The Arnold Arboretum formerly had a fine specimen which was eventually lost and which it is desired to replace. So far as we know the variety is no longer offered by any American nursery. We will be glad to hear from anyone who has small plants for sale or who is in the possession of large bushes from which scions might be obtained.

Edgar Anderson

TREES USED BY THE PIONEERS. The early white settlers probably learned something of the uses of basswood fiber from the Indians, and they employed it in a similar way for cord and rope until it was superceded by hemp and cotton fibers. The tree is also much esteemed by bee keepers, because of the excellent honey furnished by the flowers, and in some parts of the south it is locally called bee-tree. The easily worked wood was used for many purposes, including bowls for kitchen use. And because of the fact that it bends readily, it was generally employed in making ox-yokes.

Although the early settlers in the heavily forested parts of the country were prone to have little respect for trees and to regard the forest rather as an enemy to be overcome than as a friend, they were, nevertheless, dependent upon it for supplying many of their needs. Besides furnishing them fuel and shelter, they drew upon it for material for fences, furniture and many necessary implements and useful articles. It contributed directly, though only in a minor way, to the food supply, but as a shelter for game and as a hunting ground it was even more important.

The oaks and other hard woods furnished logs for the cabin walls and clapboards for the roof. The wood of the shingle oak (*Quercus imbricaria*) was particularly valued for the latter purpose, because of its straight grain that split readily under the mallet and flail. The bark of the black oak (*Quercus velutina*) was valued most highly by the tanner for converting hides into leather. Hickory was the favorite fuel wood, and it also furnished the best material for axe and other tool handles as well as for wagon timber. Hickory chips burned slowly in the smoke-house, were also reputed to impart an exceptionally good flavor to bacon and hams. Rope and coarse twine were also sometimes made from the inner bark of the hickory, and we read of hickory "galluses" doing duty in men's apparel, but they scarcely convey an impression either of comfort or security. The tough bark of the leatherwood, where it was found, was probably a much better material for such purposes. Black walnut was so common in many parts of the Middle-west that in addition to its wood being employed in house building and in the earliest cabinet making, millions of feet of the finest logs were split up into fence rails and posts. This tree and the butternut also furnished the pioneer wives with a dark brown dye for coloring homespun cloth. This was made from a solution of the hulls surrounding the nuts, and if anyone doubts its effectiveness or lasting qualities, it can be easily tested by handling and hulling the freshly fallen nuts. The black oak also furnished primitive dyes, and ink was made from the fruit of the inkberry or poke, or from oak galls and iron rust. Soap making was a home industry, and lye had first to be made from wood ashes.

Candles were made from the wax of the bayberry or wax myrtle, used either alone or mixed with tallow. Bayberry candles are still sometimes made in some localities on Cape Cod and in other parts of the country, but their fabrication is now more of a tradition and a ceremony than a practical industry.

There is no American tree about which more pioneer lore and sentiment clings than the sugar maple. To the early settlers in the northern parts of the country it furnished one of the few luxuries that were available in the way of food, and the tapping of the trees in early spring and the boiling of the sap into sugar were something of a ceremony as it still is in parts of New England.

Fruits and nuts were a minor but not negligible source of food. Wild plums, blackberries, wild grapes, chestnuts, butternuts, hickorynuts and pecans were amongst the sorts most generally prized for human consumption, and the supply of acorns and other "mast" was largely relied upon to fatten hogs and turkeys. Persimmon beer and wild cherry wine acquired vogue in places where these native fruits were abundant, but they never equalled in popularity the traditional hard cider of New England.

Many native plants early gained a reputation for medicinal virtues. It is probable that the uses of some of these were learned from the Indians, and those of others from Old World folk lore were transferred to similar American plants. Sassafras tea was a spring blood remedy, and it is still esteemed as such in some parts of the country. The bark of the slippery elm and of the prickly ash and the roots of moonseed and wild yam all had their uses in the simple pharmacopoeia of the pioneers, along with the leaves, roots or seeds of many herbaceous plants

Ernest J. Palmer